**ADTA 5410**

**Research Project and Writing Guide**

## Overview

This guide provides details on your research project, broken into components to assist with knowledge retention. Each student must submit a research paper on a chosen topic, develop a research question, and conduct thorough research using one of the following datasets:

1. [The Integrated Postsecondary Education Data](https://nces.ed.gov/ipeds/datacenter/DataFiles.aspx?goToReportId=7&sid=5e235f2a-0f0c-41dd-9998-0ba0b9976d3e&rtid=7)
2. [COVID data from ourworldindata](https://covid.ourworldindata.org/data/owid-covid-data.csv)
3. [Yahoo! Finance](https://finance.yahoo.com/)

The analysis must be performed in Python and be clear and understandable to non-experts. The project can be completed individually or in teams of up to two members. Each team submits one assignment, specifying individual contributions for grading.

## Submission Components

1. **Written Submission:**

* Submit a PDF of your project documentation and separate code files (.ipynb). The PDF should summarize your work comprehensively for grading.
* Include a separate cover page with your name(s) and paper title.
* Ensure the paper is free of grammatical errors and follows APA style for citations and references.
* Length: Approximately 10 pages, double-spaced, 1-inch margins, Times New Roman 12-point font.
* Submit the paper through plagiarism-checking software.

1. **Recorded Presentation:**

* Deliver a 10-minute video presentation summarizing your project.
* Upload the video to Canvas using tools like "Studio" or a smartphone recording.

## Writing Guide

#### Title

Choose a descriptive title for your research question.

#### Abstract (Write Last)

* Summarize in 100-200 words the major aspects of your paper, including:
  + Research question and purpose
  + Design and methods
  + Major findings
  + Brief interpretations and conclusions

#### Introduction

* Establish the context of your work.
* State the purpose, hypothesis, or problem.
* Explain your rationale, approach, and potential outcomes.
* Highlight the significance of your study.

#### Literature Review

* Summarize relevant published literature.
* Focus on primary research journals.
* Lead to your statement of purpose/hypothesis.
* Utilize Google Scholar and references in relevant papers.

#### Methodology

* You need to develop a comprehensive model to analyze your idea; a simple correlation analysis alone is insufficient.
* Describe your study's site (if applicable) and analysis method.
* Explain data analysis techniques and statistical procedures.
* Use clear, self-explanatory graphs and charts.

#### Results and Discussion

* Present key results using text and illustrative materials (tables and figures).
* Interpret results in light of existing knowledge.
* Answer fundamental questions regarding your findings and their implications.

#### References

* Provide credit to source material.
* Follow APA style.

## Grading Rubric for Project Submission

|  |  |  |  |
| --- | --- | --- | --- |
| **Category** |  | **Scoring Criteria** | **Total Points** |
| **Written Submission** | **Content**  **(100 points)** | The introduction is attention-getting, lays out the problem well. | 25 |
| Background and Literature Review are well conducted. | 25 |
| Exploratory data analysis/descriptive statistics.  Analyses are well conducted.  The results are well-explained  There is an obvious conclusion summarizing the content. | 50 |
| **Design/Language/Visualization**  **(100 points)** | Information is presented in a logical sequence. Good language skills and pronunciation are used. | 50 |
| Visual aids are well-prepared, informative, effective, and not distracting. | 25 |
| Information was well communicated. | 25 |
| **Score** |  | **Total Points** | **200** |

## Video Presentation Guide

#### Objective

Summarize your work in a concise, engaging, and clear 10-minute video.

#### Content Requirements

* **Introduction:** State research question and purpose.
* **Background/Literature Review:** Briefly overview supporting literature.
* **Methodology:** Clearly describe data collection and analysis methods.
* **Results:** Highlight key findings using visual aids.
* **Conclusion:** Summarize implications and significance.

#### Visual Aids

* Use PowerPoint or similar tools.
* Keep slides clear, focused, and visually appealing.
* Include high-quality graphs, charts, and images.

#### Technical Aspects

* Use a high-quality camera and microphone.
* Practice to maintain a steady pace and fit within the time frame.
* Dress professionally.

## Grading Rubric for the Recorded Presentation of the Project

|  |  |  |  |
| --- | --- | --- | --- |
| **Category** |  | **Scoring Criteria** | **Total Points** |
| **Presentation** | **Content**  **(100 points)** | The topic/idea of the paper is clearly stated. | 25 |
| A very brief background/literature review is given | 25 |
| The methods used in the project are explained briefly and understandably. | 25 |
| The results are clearly summarized, and a comprehensible conclusion is provided. | 25 |
| **Design/Language/Visualization**  **(100 points)** | Clear and understandable visualization and design are used. | 50 |
| A clear and understandable language is used. | 25 |
| All the members of the group participated in the video presentation. | 25 |
| **Score** |  | **Total Points** | **200** |

Please make sure that you do NOT simply read your slides.